

REMARKS

Applicants appreciate the thorough review of the present application as reflected in the Official Action mailed September 1, 2004. Applicants have amended Claims 1, 24 and 26 to clarify that the source address selection is carried out by the data processing system executing the application for which the connection is to be originated. Applicants have also amended Claims 15, 25 and 27 to clarify that the communication protocol stack is at the data processing system executing the application.

The Information Disclosure Statements

Applicants wish to bring to the Examiner's attention Information Disclosure Statements that were filed August 10, 2004 and August 19, 2004. Both of these IDSs appear in PAIR. Applicants also wish to bring to the Examiner's attention an IDS that is being filed concurrently herewith. Applicants request that the Examiner return initialed copies of the PTO-1449 forms for these IDSs with any subsequent communication.

The Claims Are Not Obvious

Claims 1-13, 15-22 and 24-27 stand rejected under 35 U.S.C. § 103 as obvious in light of United States Patent No. 6,252,878 to Locklear, Jr. *et al.* (hereinafter "Locklear") and "The Next Step in Server Load Balancing" from Alteon Web Systems (hereinafter "Alteon"). Official Action, pp. 2 and 4. Claims 14 and 23 stand rejected as obvious based on Locklear, Alteon and Applicants' Alleged Admitted Prior Art regarding the OS/390 Sysplex. Official Action, p. 11. Applicants will first address the rejections of the independent claims and then address the rejections of the dependent claims.

Independent Claims 1, 24 and 26

In particular, with regard to Claims 1, 24 and 26, the Official Action cites to col. 5, lines 1-23 and 37-58 and col. 6, lines 50-67 of Locklear as teaching each of the recitations of these claims except possibly the recitation that the dynamic network

address is used as a source address. Official Action, pp. 2-3. The Official Action cites to Alteon as providing such teachings. Official Action, p. 3.

Embodiments of the present invention, as reflected, for example, in Claim 1, provide for establishing network connections where a dynamic network address is used as a source address in establishing a connection if the request to establish the connection is associated with an application executing on the data processing system and the dynamic network address is associated with the application at the data processing system on which the application is executing. Thus, Claim 1 recites:

1. (Original) A method of **establishing a connection originated by an application executing on a data processing system** in a cluster of data processing systems, the method comprising the following carried out by the data processing system executing the application:
 associating a dynamic network address with the application at the data processing system on which the application is executing;
 determining at the data processing system executing the application if a received request for the data processing system to originate a connection is associated with the application; and
 establishing the connection from the data processing system executing the application utilizing the associated dynamic network address as a source address for the connection if the request is associated with the application.

Applicants submit that at least the highlighted portions of Claim 1 are neither disclosed nor suggested by the cited portions of Locklear and Alteon. Similar recitations are found in Claims 24 and 26.

In contrast to the application specific assignment of a dynamic network address that occurs at the data processing system executing the application that originated the connection as recited in Claim 1, the cited portions of Locklear appear to relate to network address translation for sessions. In particular, col. 5, lines 1-23 of Locklear do not appear to describe associating a dynamic network address with an application at the data processing system where the application is executing. Instead, these portions of Locklear appear to describe an access server 16 that provides an originating device 12 an address to be used for a session originated by the originating device 12. Locklear, col. 5, lines 1-23. There does not appear to be an association of a dynamic network address at a data processing system that is executing the application associated with the dynamic network address as recited in Claims 1, 24

and 26. Applicants submit that merely providing an address for use in a session does not disclose or suggest the specific recitations of Claim 1, 24 and 26.

Furthermore, col. 5, lines 37-58 and col. 6, lines 50-67 of Locklear do not describe determining at the data processing system executing the application if a request for a data processing system to originate a connection is associated with the application associated with the dynamic network address as recited in Claims 1, 24 and 26. In fact, it is unclear from the cited portions of Locklear what elements in Locklear the Official Action interprets as the data processing system on which the application is executing that originates the connection. The access server 16 of Locklear does not appear to originate a connection but provides an address to an originating device 14 as discussed above with reference to col. 5, lines 1-23 of Locklear. In fact, it appears that the access server 16 assigns an address for use in subsequent communications between the devices 12 and 14. Locklear, col. 5, lines 37-42. Thus, it appears that the devices 12 and 14 that originate the communications do not select the address nor is there any indication that the address is associated with an application executing on either the device 12 or the device 14. Accordingly, the cited portions of Locklear do not appear to disclose either "associating a dynamic network address with the application at the data processing system on which the application is executing" or "determining at the data processing system executing the application if a received request for the data processing system to originate a connection is associated with the application" as recited in Claim 1.

With regard to "establishing the connection from the data processing system executing the application utilizing the associated dynamic network address as a source address for the connection if the request is associated with the application," the Official Action acknowledges that Locklear does not disclose such recitations. For example, there does not appear to be any conditional use of a dynamic network address as a source address based on whether the request is associated with an application executing on the data processing system originating the connection. However, these recitations are also not disclosed or suggested by paragraphs 1-4 on page 5 of Alteon as asserted in the Official Action. See Official Action, p. 3. While paragraphs 1-4 of page 5 of Alteon do describe using a destination portion number to identify an application to be load balanced and source and destination address

substitution, these do not describe selecting a dynamic network address as a source address for a connection originated by the data processing system executing an application requesting the connection as is recited in Claims 1, 24 and 26.

Accordingly, Applicants submit that Claims 1, 24 and 26 and the claims that depend from them are not disclosed or suggested by the cited portions of Locklear and/or Alteon.

Independent Claims 5, 25 and 27 and Claim 15

With regard to Claims 5, 15, 25 and 27, the Official Action cites to pages 1-2 and 5-6 of Alteon and postulates multiple scenarios where the disclosure of Alteon discloses the recitations of Claims 5, 15, 25 and 27. Official Action, pp. 5-9.

However, none of these scenarios disclose the recitations of these claims and further, these scenarios twist and distort the language of the claims and the cited references beyond their plain meaning.

In particular, in rejecting Claims 5, 25 and 27, the Official Action asserts that, while the client in Alteon originates a connection request, the connection is not established until the application sends a response and, therefore, it would be reasonable to interpret the application as originating the connection, not the client. Official Action, p. 5. Applicants submit that interpreting responding to a connection request from a client as originating a connection is not reasonable and ignores the plain language of the claims. In any event, the cited portions of Alteon describe the source address substitution to include the virtual address as the source address of **responses** from the applications at the switch, not at the data processing system executing the application. Thus, Applicants submit that, even under the incorrect interpretation asserted in the Official Action, the cited portions of Alteon do not disclose or suggest "associating a dynamic virtual IP address (DVIPA) with the application at the communication protocol stack of the data processing system in the cluster of data processing systems executing the application so as to utilize the DVIPA as the source address for the connection originated by the application" as recited in Claims 5, 25 and 27.

The Official Action also asserts that the connection may be considered the connection established between the server switch and the back-end server and the

application can be interpreted as the session running on the server switch. Official Action, p. 5. However, the virtual IP address incorporated as a source address in the communications is only described as being used between the switch and the client. See Alteon, p. 5, ("the Web Switch intercepts packets traveling from the real server to the client and performs the reverse address substitution. It replaces the real server's actual IP address in the Network Layer source address field with the VIP and forwards each modified frame to the client."). Thus, if the connection is between the switch and the server is considered the connection originated at the data processing system executing the application, there is no use of the VIP between the server and the switch. Applicants submit that even under the second scenario asserted in the Official Action, the cited references, therefore, do not disclose or suggest the recitations of Claims 5, 25 and 27.

The Official Action does concede that, if the application is considered the application server in Alteon, then Alteon does not disclose the application originating a request but asserts that the application originating a request is well known as evidenced by Locklear. Official Action, pp. 5-6. However, Applicants are not merely claiming originating requests at application servers but having the application server select a virtual IP address when an application originates the request. There is no indication that the application servers in Alteon are even aware that a virtual IP address is being used, let alone a mechanism for allowing them to include the virtual IP address as a source address in connections that the application server initiates. Furthermore, as discussed above, it is unclear how Locklear could be interpreted as disclosing address selection by devices 12 and 14 when it appears that the address is provided by the access server. Applicants do not dispute that servers may originate connections, but Applicants submit that the cited references do not disclose or suggest the recitations of Claims 5, 25 and 27.

With regard to Claim 15, Applicants submit that Claim 15 is not disclosed or suggested by the cited references for reasons analogous to those discussed above with reference to Claims 5, 25 and 27. For example, the first interpretation discussed in rejecting Claim 15 is similar to the second scenario discussed above with reference to Claims 5, 25 and 27. Official Action, p. 9. Claim 15 recites "a communication protocol stack on the data processing system in the cluster of data processing systems

executing the application, the communication protocol stack being configured to associate a dynamic virtual Internet protocol address (DVIPA) with the application so that the DVIPA is utilized as a source address for a connection request from the application." As such, Applicants submit that analogous reasoning to that discussed above with reference to Claims 5, 25 and 27 applies and that the connection between the switch and the server in Alteon does not disclose these recitations of Claim 15.

Similar arguments to those made with reference to Claims 5, 25 and 27 may also be made with reference to Claim 15 if the connection request is interpreted as originating at the application server. Accordingly, Applicants submit that Claim 15 and the claims that depend from Claim 15 are also patentable over the cited references.

Finally, with regard to the Office Action's specific interpretation of the term "communication protocol stack," Applicants do not acquiesce in the assertion that a communication protocol stack is inherent for processing TCP/IP communications. See Official Action, p. 5. However, Applicants submit that, even as interpreted by the Examiner, the claims reciting a communication protocol stack are patentable over the cited references for the reasons discussed above.

The Dependent Claims

Applicants submit that each of the dependent claims is patentable at least as depending from a patentable base claim. Applicants submit that many of the dependent claims are also separately patentable over the cited references. For example, Claim 2 recites "determining if the application has specified a network address for the requested connection" and "utilizing the specified network address to establish the connection if the application has specified a network address." Claim 2 further recites "selectively utilizing the associated dynamic network address as the source address for the connection if the application has not specified a network address for the requested connection." Applicants submit that neither of the cited references disclose or suggest such a selective use of a dynamic network address and a specified network address to originate connections as recited in Claim 2. In fact, the Official Action asserts that existing sessions disclose the use of a specified address. Official Action, p. 3. However, if a session is interpreted as a connection, then by

definition an existing session address cannot be selected to originate a connection as the session already exists. Accordingly, Applicants submit that Claim 2 is separately patentable over the cited references for at least these additional reasons.

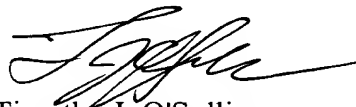
Recitations regarding the selective use of virtual and specified addresses are also found in, for example, Claims 7 and 16. Accordingly, Applicants submit that these claims are also separately patentable for at least reasons analogous to those discussed above with reference to Claim 2.

Conclusion

In light of the above discussion, Applicants submit that the present application is in condition for allowance, which action is respectfully requested.

It is not believed that an extension of time and/or additional fee(s)-including fees for net addition of claims-are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned under 37 C.F.R. §1.136(a). Any additional fees believed to be due in connection with this paper may be charged to our Deposit Account No. 09-0461.

Respectfully submitted,



Timothy J. O'Sullivan
Registration No. 35,632

Customer No. 46589
Myers Bigel Sibley & Sajovec
P. O. Box 37428
Raleigh, North Carolina 27627
Telephone: (919) 854-1400
Facsimile: (919) 854-1401